

1 1 (cancelled).

1 2 (amended). A water purification system comprising:

2 an integral, compact enclosure containing a plurality of vertically  
3 oriented, serially coupled compartments configured to direct a flow of water  
4 alternately in upward and downward directions, with a first of said  
5 compartments having a water inlet and a last of said compartments having a  
6 water outlet, each said compartment extending the full vertical dimension of  
7 said enclosure,

8 a venturi coupled to said water inlet, said flow of water passing  
9 through said venturi,

10 an ozone generator in one of said compartments downstream from  
11 said venturi and further comprising:

12 an ultraviolet lamp positioned in a watertight housing located  
13 in one of said compartments, with walls of said watertight housing transparent  
14 to ultraviolet radiation from said ultraviolet lamp,

15 an air entrance in said watertight housing and an ozone/air  
16 outlet in said watertight housing, said ozone/air outlet coupled to provide  
17 ozone to said venturi and in turn to ~~who~~ said flow of water.

1 3 (amended). A water purification system as set forth in claim 2 further  
2 comprising:

3 a mixing chamber in said venturi, said mixing chamber

4 communicating with at least two suction ports and said flow of water, said  
5 ozone/air outlet coupled to one of said suction ports and at least one  
6 substance that reacts beneficially with ozone coupled to the other of said  
7 suction ports.

1 4 (amended). A water purification system as set forth in claim 3 wherein said  
2 mixing chamber is an annular mixing chamber surrounding said flow of water  
3 wherein said ozone and said substance that reacts beneficially with ozone are  
4 mixed together prior to being introduced to said flow of water, with and  
5 providing reaction products of said at least one substance and said ozone  
6 introduced annularly to said flow of water.

1 5 (previously presented). A water purification system as set forth in claim 4  
2 wherein said substance is a liquid sanitizer.

1 6 (previously presented). A water purification system as set forth in claim 2  
2 wherein one or more of said compartments contain turbulence-inducing  
3 devices.

1 7 (previously presented). A water purification system as set forth in claim 6  
2 wherein some of said turbulence-inducing devices include alternately  
3 positioned baffles along walls of at least one of said compartments to force said  
4 flow of water to flow generally in back and forth relation through said at least

5 one of said compartments.

1 8 (previously presented). A water purification system as set forth in claim 6  
2 wherein some of said turbulence-inducing devices are configured to force said  
3 flow of water to flow generally spirally through a said compartment.

1 9 (amended). A water purification system as set forth in claim 8 wherein said  
2 housing is generally centrally located in a said compartment containing a one  
3 of said turbulence-inducing devices to cause water to spiral around in said  
4 housing.

1 10 (previously presented). A water purification system as set forth in claim 2  
2 wherein a last of said compartments contains de-gassing apparatus.

1 11 (previously presented). A water purification system as set forth in claim 12  
2 wherein said compartments through which water is flowing downward are  
3 smaller in cross section and said compartments through which water is flowing  
4 upward are larger in cross section.

1 12 (previously presented). A water purification system as set forth in claim 2  
2 wherein said enclosure and said vertically oriented compartments are about 18  
3 inches in height.

1 13 (amended). A water purification system comprising:

2 an integrally constructed, compact housing of relatively narrow width,  
3 said housing vertically divided into at least three compartments, with a water  
4 inlet in a first of said compartments and a water outlet in a last of said  
5 compartments, said compartments communicating with each other so that a  
6 flow of water through said compartments is serial and alternates in upward  
7 and downward directions,

8 an ultraviolet ozone generator having an air inlet and an ozone/air  
9 outlet mounted within one of said compartments, said ozone generator  
10 providing ultraviolet radiation to said flow of water,

11 a mixing device connected ~~coupled~~ to said water inlet and having a  
12 plurality of inlet ports, said inlet ports communicating with a mixing chamber  
13 in said mixing device, said ozone/air outlet coupled to one of said inlet ports  
14 and a supply of a substance that reacts beneficially with ozone from said ozone  
15 generator coupled to another of said inlet ports.

1 14 (amended). A water purification system as set forth in claim 13 wherein  
2 said mixing device is a venturi, and said mixing chamber is an annular  
3 chamber communicating with and surrounding said flow of water so that said  
4 ozone and said substance that reacts beneficially with ozone are mixed prior to  
5 being introduced to said flow of water.

1 15 (previously presented). A water purification system as set forth in claim 14

2 further comprising turbulence-inducing devices in at least one of said  
3 compartments.

1 16 (withdrawn). A method for sanitizing water comprising:

- 2 1) mixing ozone into a flow of water,
- 3 2) directing said flow of water, in serial relation and at least once in an  
4 upward direction and a downward direction, said flow of water being slower in  
5 said upward direction and faster in said downward direction,
- 6 3) causing turbulence in said flow of water,
- 7 4) after the mixing of 1, the serially directing of 2 and the turbulence  
8 of 3, exposing said flow of water containing residual ozone to ultraviolet  
9 radiation.

1 17 (withdrawn). A method as set forth in claim 15 further comprising mixing  
2 said ozone and a substance that reacts beneficially with ozone in an annular  
3 mixing cavity surrounding said flow of water and providing reaction products of  
4 said ozone and said substance to said flow of water.

1 18 (withdrawn). A method as set forth in claim 16 further comprising mixing  
2 said ozone with at least a halogen sanitizer.

1 19 (new). A water purification apparatus as set forth in claim 10 wherein said  
2 watertight housing with said ultraviolet lamp therein is located in a one of said

3 compartments immediately preceding said last of said compartments  
4 containing said de-gassing apparatus.

1 20 (new). A water purification system as set forth in claim 2 wherein said  
2 venturi is an adjustable venturi to vary a quantity of said ozone and said  
3 substance that reacts beneficially with ozone provided to said flow of water.

1 21 (new). A water purification system as set forth in claim 14 wherein said  
2 venturi is adjustable to vary quantities of said ozone produced by said ozone  
3 generator and said substance that reacts beneficially with said ozone provided  
4 to said flow of water.